telephony

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Time division digital switches: a progress report on installations in North America

Table 1

North American time division digital switching (YE 84)

System	ITT North 1210	GTE No. 3 EAX	GTE No. 5 EAX	NEC NEAX 61	STROM DCO	NTI DMS10	NTI DMS 100/200/300	TRW VID ITS 4/5	AT&T TECH. No. 4 ESS	AT&T TECH. No. 5 ESS	ERICSSON AXE 10	CIT ALCA E10-5	Totals
1. Base units in service YE 84													
a) Total Units	179	30	201	141	503	1011	565	183	116	85	4	5	3023
b) End Offices	164		201	120	467	1011	288	125	N.A.	75		5	2456
c) Intermediate Offices	1	27		4	6		110	17	108	1	1		275
d) Combined Inter./ End Office	14		5	17	28		138	41	N.A.	9			252
e) PABX-CPE/ Reseller-OCC			1	N.A.	5		24						30
f) International Gateway					1		1		8		1		11
g) Mobile Radio				3	2		4				2		11
2. Number of remote switching units in service YE 84	70	N.A.	140	99	337	246	453	N.A.	N.A.	26			1371
3. Thousands of total lines in service YE 84	938	N.A.	2000	533	1018	1450.9	4668.4	319	N.A.	1000	83	5.6	11,941.2
4. Thousands of trunks in service YE 84 (For Intermediate and Combined Intermediate/End Offices)	100	191		128	123	N.A.	1010.5	368	3505	39	21.5		5486

Table 2

North American time division digital switching (YE 84) Largest Offices in Service by System

System	Local		Intermediate		Local/toll	
	Location	Lines	Location	Trunks	Location	Terminations
1210	So. Fort Myers, Fla.	17,280	Charlotte Amalie, Vt.	18,400	Roseville, Calif.	4000
DCO	Cheshire, Conn.	10,044	Elko, Nev.	1598	Middleton, Wis.	10,905
DMS 10	Camden, Del.	6880				
DMS 100 (family)	Newton, Mass.	55,580	Montreal	29,900	Kitchner, Ontario	47,300
E10-FIVE	Monrovia, Ind.	2000				
EAX 3			Calgary, Alberta	21,920		
EAX 5	Lincoln, Neb.	44,604	Oberlin, Ohio	883	Lafayette, Ind.	10,888
ESS 4			Los Angeles	71,000		
ESS 5	Lexington, Mass.	31,400	Milwaukee	14,000	Fredrick, Md.	27,648
NEAX 61	Hesperia, Calif.	12,813	Chicago	30,240	Ridgecrest, Calif.	7481

For the past 4 years, Amos E. Joel Jr., formerly of AT&T Bell Laboratories and now an executive consultant for AT&T Technologies, has been providing TELEPHONY with hard data on progress made in installing time division digital switches in North America. This report includes the results for 1984, which are present as Tables 1 and 2. It also includes the data for 1983, presented as Tables 3 and 4; the data for 1982, presented as Tables 5 and 6; and the data for 1981, presented as Tables 7 and 8. Tables 1, 3, 5 and 7 include information on which types of digital switches were installed and their size and location. Tables 2, 4, 6 and 8 include information on the largest offices of each type of equipment. Tables 3, 4, 5, 6, 7 and 8 most recently appeared in TELEPHONY, July 9, 1984, pp. 55-57. Tables 5-7 appear on pp. 70 and 71.

Table 3

North American time division digital switching (YE 83)

System	ITT/ North 1210	No. 3 EAX	No. 5 EAX	NEAX 61	DCO	DMS 10	DMS 100/200/300	ITS 4/5	No. 4 ESS	No. 5 ESS	AXE 10	E10-5 (TSS)	Totals
1. Base units in service YE 83													
a) Total	191	27	75	104	402	794	384	183	99	13	1	2	2274
b) Class 5	137		68	77	375	778	215	125	NA	11		2	1687
c) Class 4/5	44		6	19	22	15	92	41		2			241
d) Class 4	10	27		3	5	1	35	17	99				197
e) PABX-CPE			1	N/A			8						9
f) International gateway					2		3	1		(8)			3
g) OCC tandem				3			32				1		36
h) Mobile radio													
2. Number of remote switching units in service YE 83													
	95	NA	5	68	208	189	276	319		NA			960
3. Thousands of total lines in service YE 83													
	712	NA	550	410	739	1181	2800	368	NA	66		3	7429
4. Thousands of trunks in service YE 83 (all classes)													
	66	233	21	77	96	7	500	23	2975	5			4003

N.A. - Not available
NA - Not applicable

Table 4

North American time division digital switching (YE 83) Largest Offices in Service by System

System	Local		Toll		Local toll	
	Location	Lines	Location	Trunks	Location	Terminations
1210	Jefferson City, Mo.	20,140	Jefferson City, Mo.	2324	Roseville, Calif.	4000
DCO	Cheshire, Conn.	10,000	Boscobel, Wis.	1000	Middleton, Wis.	10,800
DMS 10	Harrison, Ark.	6300	Redmond, Ore.	800	Cheyenne, Okla.	1700
DMS 100 family	Toronto	40,000	Montreal	29,900	Buttler, Pa.	27,120
EAX 3			Calgary, Alberta	15,360		
EAX 5	Lincoln, Neb.	25,000	Oberlin, Ohio	883	Lafayette, Ind.	10,888
ESS 4			Los Angeles	71,000		
ESS 5	Bradford, Pa.	12,000			Leesberg, Va.	13,000
NEAX 61	Victorville, Calif.	13,752	Winter Park, Fla.	5640	Thomaston, Ga.	10,246

Table 5

North American time division digital switching (YE 82)

System	ITT North 1210	No. 3 EAX	No. 5 EAX	NEAX 61	DCO	DMS 10	DMS 100/200/300	ITS 4/5	No. 4 ESS	No. 5 ESS	Totals
1. Base units in service YE 82											
a) Total	163	36	10	78	292	612	263	183	90	2	1729
b) Class 5	111		10	63	286	597	148	125		2	1342
c) Class 4/5	42			13	5	11	67	41			182
d) Class 4	10	36		2	1	1	27	17	90		184
e) Other							21				21
2. Number of remote switching units in service YE 82											
On base units	75			49	141	145	248	319			977
3. Number of total lines in service YE 82	573K		25K	323K	509K	896K	1857K	308K		3K	4494K
4. Number of trunks in service YE 82 (Class 4 or 4/5)	57K	204K		16K	53K	3K	297K	19K	2713		3362K
5. Total systems and lines on order or expected YE 83											
Systems	N/A	39	650	145		1175	550	N/A	98	N/A	
Lines	N/A	N/A	3M	320K		1.5M	5M		NA	N/A	
Trunks	N/A	250K	NA	139K		NA	700K		N/A	N/A	

*-525 remotes
N/A - Not available
NA - Not applicable

Table 6

North American time division digital switching (YE 82) Largest Offices in Service by System

	Local		Toll		Local/toll	
System	Location	Line	Location	Trunks	Location	Terminations
ITT North 1210	Jeff. City, Mo.	20K	Jeff. City, Mo.	2.3K	Roseville, Calif.	4K
No. 3 EAX	NA	NA	Calgary, Alberta	5.8K	NA	NA
No. 5 EAX	First Colony, Texas.	6K				
NEAX 61	Victorville, Calif.	13.7K	Winter Park, Fla.	5.8K	Thomaston, Ga.	10.4K
DCO	Wile Platte, La.	7.5K	Boscobel, Wis.	1K	Middleton, Wis.	10.8K
DMS 10	Harrison, Ark.	6K	Pearce, Ariz.	250	Pinetop, Ore.	2.1K
DMS 100/200/300	Toronto	43.5K	Toronto	23K	Kitchener, Ontario	40K
ITS 4/5*	St. Mary's, Ga.	7K	Gander, Newfoundland	1.2K	Mauston, Wis.	6.5K
No. 4 ESS	NA	NA	Los Angeles	70.4K	NA	NA
No. 5 ESS	Cedarville, Ohio	2K				

NA - Not applicable
*-1981 data

Table 7

North American time division digital switching (YE81)

System(s)	No. 4 ESS	ITS 4/5	DCO	DMS 10	No. 3 EAX	1210	DMS 100/200/ 300	NEAX 61	Totals
1. First service	1/76	3/76	7/77	10/77	3/78	9/78	4/79	5/79	
2. Base units in service as of year end (YE) 1981									
a) Total	74	165	219	443	33	112	150	47	1243
b) Class 5	NA	125	214	441	NA	77	92	33	982
c) Class 4/5	NA	22	4	(1)	NA	27	34	12	99
d) Class 4 only	74	18	1	2	33	8	24	2	162
3. Remote switching units in service YE 1981									
a) Total	NA	315	131	98	NA	50	63	29	686
b) On base units	NA	315	131	98	NA	50	63	0	657
c) On remotes	NA	NA	N/A	N/A	NA	NA	NA	29	29
4. Total lines in service YE 1981	NA	180K	380K	616K	NA	375K	910K	187K	2648K
5. Trunks in service YE 1981 on Class 4 or Class 4/5 offices	2174K	70K	37K	NA	149K	35K	137K	10K	2612K

NA—Not applicable
N/A—Not available
(1)—Included in Class 5

Table 8

North American time division digital switching (YE 81) Largest Offices in Service by System

System	Local		Toll		Local/toll	
	Location	Lines	Location	Trunks	Location	Terminations
No. 4 ESS	NA	NA	Houston	59.3K	NA	NA
ITS 4/5	St. Mary's, Ga.	5.6K	Gander, NF	1.2K	Mauston, Wis.	6.5K
DCO	S. Katy, Texas	7K	Boscobel, Wis.	1K	Middleton, Wis.	10.8K
DMS 10	Harrison, Ark.	5.1K	Redmond, Calif.	406	N/A	N/A
No. 3 EAX	NA	NA	New Westminster, B.C.	13.K	NA	NA
1210	Jefferson City, Mo.	20K	Glenwood, Ark.	2K	Roseville, Calif.	13K
DMS 100/200/300	Runnymede, Ontario	43.5K	Montreal	27.7K	Kitchner, Ontario	41.2K
NEAX 61	Victorville, Calif.	11.8K	Winter Park, Fla.	3.5K	Ridgecrest, Calif.	8.8K

NA-Not applicable
N/A—Not available